

REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

Claims 1-26 remain in this application. Claims 1-17 have been allowed by the Examiner. The Examiner has further acknowledged that claims 22-25 are directed to allowable subject matter. These claims will not be discussed further in this amendment.

The Invention

The present invention is directed to a method of supplying workpieces to workstations using an autoloader. The method includes receiving one or more signals from individual workstations; signal types including call signals, ready signals, and error signals. From a group of received call signals, the oldest call signal that has not been responded to and has not come from a workstation that has also transmitted an error signal is responded to first. Response includes moving a selected workpiece from an input area to the selected workstation that transmitted the selected call signal. A ready signal or error signal is sought from the selected workstation. If a ready signal is found, the selected workpiece is loaded into the selected workstation. If instead an error signal is found, the process starts over and the next oldest call signal is responded to. Accordingly, the present invention is directed toward a manufacturing environment wherein multiple workstations are

available to perform the same manufacturing or machining task (i.e. parallel manufacture).

The Rejections under §102

Claims 18, 19 and 21 stand rejected under 35 U.S.C. §102(e) as being anticipated, or in the alternative under 35 U.S.C. §103(a) as obvious over U.S. Patent 6,662,076 to Conboy et al. (hereinafter Conboy). The Examiner's rejection is traversed for the following reasons.

Conboy is directed to the management of move requests from a factory system to an automated material handling system. A method is described which includes receiving a move request from the factory system and selectively passing the move request to an automated material handling system (AMHS) based on a comparison of the move request with one or more conditions of the AMHS. The factory system typically stores a processing sequence for semiconductor wafers or the like, the sequence comprising a series of steps which are performed on the wafer. The AMHS includes a database of conditions such as the capacity of a tool and if the tool is down or otherwise inoperable. Conboy does not disclose a system where the AMHS receives requests for parts from the tool itself.

Regarding claim 18, Conboy does not disclose or teach a method of supplying workpieces to a plurality of workstations including the steps of "receiving all call and error signals transmitted from the workstations", and "supplying each of the workstations that transmits a call signal" wherein the supplying step is performed "such that the workpieces are supplied to the workstations based on the

chronological order of the receipt of the call signals from the workstations". Rather, Conboy discloses and teaches a method where a *factory system* transmits signals to an AMHS to move parts (typically semi-conductor wafers) to load the tools where work is performed on the parts. The AMHS may include stored information regarding the operability of tools or whether a particular tool is full that can improve the efficiency of the overall system. Thus, the move requests may be passed to the AMHS with or without a modification such as a change to the tool set to receive a selected part. However, the method taught by Conboy utilizing a factory system and stored conditions within the AMHS is not the same as, nor as efficient as the claimed method where call signals are received directly from workstations that are able to immediately receive parts. Reconsideration and withdrawal of the rejection of claim 18 is respectfully requested.

Regarding claim 19, Conboy does not disclose a method of supplying workpieces to a plurality of workstations including the step of determining whether "one of the workstations has transmitted an error signal, moving said one of the workpieces to a next one of the workstations that transmitted a call signal that was received subsequent to the call signal from said one of the workstations." As described above with respect to claim 18, Conboy does not teach or suggest call signals received directly from workstations. Rather, Conboy teaches a factory system that sends move signals to an AMHS. Reconsideration and withdrawal of the rejection of claim 19 is respectfully requested.

Regarding claim 21, Conboy does not disclose or teach a method of moving a workpiece through a workline comprising a plurality of work zones including the steps of "receiving all call and error signals transmitted from the workstations in the

first one of the zones" and "for all received call signals form the workstations in the first one of the zones, determining a selected one of the call signals, which is the oldest one of the call signals that has not been responded to and has not come from a workstation that has also transmitted an error signal." As described above with respect to claims 18 and 19, Conboy does not teach or suggest call signals received directly from workstations. Rather, Conboy teaches a factory system that sends move signals to an AMHS. Reconsideration and withdrawal of the rejection of claim 21 is respectfully requested.

The Rejections under §103

Claims 20 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Conboy. The Examiner's rejection is traversed for the following reasons. Both claims 20 and 26 depend directly or indirectly on claims which are allowable for reasons brought forth in this amendment. Reconsideration and withdrawal of the rejection of claims 20 and 26 is respectfully requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. HON-14852.

Respectfully submitted,

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